

REMARKS

Independent claims 1, 4 and 7 were examined. No specific comments were given on dependent claims 2-3, 5-6, and 8-9. Independent claims 1, 4, and 7 were rejected under 35 USC §112. Re-examination and reconsideration of the claims, as amended, is respectfully requested.

2. Applicant gratefully acknowledges the withdrawal of the finality of the rejection of the last office action.

Rejections under 35 USC §112:

6. This rejection has respectfully been overcome. Claims 1, 4, and 7 have been amended in response to the specific 35 USC §112 rejections to more particularly point out and distinctly claim the subject matter which applicant regards as the invention. New claims 10, 11, 12, and 13 have been added that provide additional limitations and details on the subject matter which applicant regards as the invention.

7a. 35 USC §112 rejection of the limitation "the internet":

Applicant respectfully overcomes this rejection by amending Claims 1, 4, and 7 to more specifically teach that the limitation "the internet" is "an interconnected system of networks that connects computers around the world via the TCP/IP protocol."

This use of the term "internet" corresponds to standard usage of the word, and finds support in standard dictionary definitions of the word "internet." For example, the search engine "Google" shows that a highly cited listing for "internet definition" is

Answers.com, which defines "internet" as:

"An interconnected system of networks that connects computers around the world via the TCP/IP protocol"

The online Princeton University dictionary Wordnet 2.1 (2006 version, available online at: <http://wordnet.princeton.edu/>) and Wordnet 1.71 (2001 version, available at <http://wordnet.princeton.edu/oldversions>) has a similar internet definition:

"a computer network consisting of a worldwide network of computer networks that use the TCP/IP network protocols to facilitate data transmission and exchange"

This definition of the Internet in terms of a world-wide network of computers connected using the TCP/IP protocol also finds support in the present specification. For example, see the present specification paragraph discussing web pages (page 2, last paragraph, in the originally submitted format):

For purposes of this discussion, "web page" is defined as an HTML, XML, or XHTML electronic document on the world wide web, identified by a unique Universal Resource Identifier (URI) or unique Universal Resource Locator (URL), and transmitted over the internet using the (HTTP) Hypertext Transfer Protocol, and usually the TCP/IP protocol. [emphasis added]

7b. 35 USC §112 rejection of the limitation "the external device":

The rejection that the limitation "the external device" is indefinite is respectfully overcome. Here, the earlier prosecution history is relevant. Applicant had previously argued against any additional limitations to "the external device" limitation in applicant's response to the September 2, 2005 office action, submitted December 29, 2005 (page 7 paragraph 7, to page 8 paragraph 1). In this earlier response, applicant argued:

The term "SBDRL devices" (SBDRL was defined as "Short-range Bi-directional Digital Radio Link) is supported throughout the text of the present specification. Although the applicant would have no objection to using the full term "short-range bi-directional digital radio link controlled devices" as the language for the functional limitation, the

shorter term "digital radio controlled devices" appears to be preferable as the "short-range bi-directional digital radio link" limitation of the digital radio control is discussed in other claim limitations, and repetition is unnecessary and diminishes readability.

Given examiner's subsequent 4/20/2006 office action rejecting "the external device" on the last line of claims 1, 4 and 7 as being indefinite under 35 USC §112; and absent other guidance, applicant must assume that applicant's earlier 12/29/05 argument against incorporating the short-range bi-directional digital radio link controlled limitation was unpersuasive. Accordingly, applicant has amended claims 1, 4, and 7 to replace the term "the external device" on the last line with the additional limitations: "the short-range bi-directional digital radio link controlled external device."

7c. Overcoming the 35 USC §112 rejection of the limitation "the external device" through new claims incorporating additional "external device" limitations.

New claims 10-13 have been added to further overcome examiner's rejection that the term "the external device" is indefinite under 35 USC §112.

New independent claim 10 adds further external device limitations to claim 1. These additional limitations state that "said external device transmits a device identifier that enables the robot to determine the nature of said device or the services offered by said device". These limitations find support in paragraphs 4 and 5 from originally, formatted specification page 14, shown below:

Discovery of locally available SBDRL devices: Although in some situations, the distribution and functionality of the various external SBDRL devices will be known to the robot or the remote operator before the robot moves into proximity of the device, in other situations, this will not be previously known. In these later situations, where the distribution and functionality of the SBDRL devices is not previously known in advance,

it is advantageous if the robot and the SBDRL devices are equipped to enable automatic discovery of the nature, functions, and services provided by each device.

A number of schemes to enable automatic discovery of the nature, functions, and services of remote devices are known in the art. This includes schemes such as "JiniTM", Universal plug and playTM, SalutationTM, Service Location protocol, etc. One scheme, particularly useful for "Bluetooth" (IEEE 802.15b) type devices makes use of the "Service Discovery Protocol". Briefly, Bluetooth type SBDRL devices may maintain a service registry consisting of both device identifiers, and functions of the device that are available for use over the SBDRL link. Upon SBDRL query, if the device has its' discovery functionality enabled, this information is made available to the inquiring device. [emphasis added]

New dependent claim 11: "The robot of claim 10, in which said robot passes said device identifier information to a remote controller on the internet, and automatically receives new commands or scripts for control of said device from said internet controller, allowing devices not previously known to the robot to be utilized." finds support in two specification paragraphs from originally formatted page 12 (paragraph 4), and pages 14-15 (paragraph 6 – paragraph 1) shown below:

On page 12, the specification disclosed:

For greatest flexibility, the robotic software should be designed to enable the remote Internet controller to upload new automatic instructions or scripts to the robot. These uploaded automatic commands will typically be used to control the robot when the remote user is off-line, when extremely rapid action is required, or when a complex series of actions is required. In addition to robotic control instructions, these instructions may also include an automatic series of commands to query SBDRL devices, and commands to send to various SBDRL devices. [emphasis added]

On page 14-15, the specification discussed:

By querying such SBDRL service registry information, and either processing it using the robot's own onboard computer processor(s), or passing the information along to a remote controller on the internet, SBDRL devices not previously known to the robot and/or its remote internet operator may be utilized. This greatly increases the flexibility of the robot, and this use of SBDRL devices that enable remote discovery of their nature and services is generally preferred. To better facilitate cooperation with other external devices, the robot itself may also maintain a discoverable SBDRL "service discovery protocol" describing the robot's own nature and useable functions. [emphasis added]

New dependent claims 12 and 13 are essentially repeats of earlier dependent claims 2-3, 5-6, and 8-9.

8: Examiner's determination that claims 1-9 would be allowable if rewritten or amended to overcome the rejections under 35 USC §112 is gratefully acknowledged. Applicant has accordingly amended these claims, and added additional claims containing additional device limitations.

If examiner determines that further amendments are necessary, Applicant respectfully requests that the next office action be made non-final on the basis that no comments were given on dependent claims 2, 3, 5, 6, 8 and 9. This would normally be required under MPEP 2260.01.

2260.01 Dependent Claims: If a base patent claim has been rejected or canceled, any claim which is directly or indirectly dependent thereon should be allowed if it is otherwise allowable. The dependent claim should not be objected to or rejected merely because it depends on a rejected or canceled claim [emphasis added]

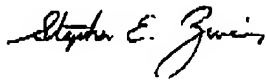
Because no comments were given on these dependent claims, and because few specific suggestions (as recommended by MPEP 7.34.01 and MPEP 2173.05(e)) were given as to how best to correct the 35 USC §112 rejections, applicant lacked information on how

best to amend the independent claims. However to expedite prosecution, applicant has nonetheless amended the claims on the basis of available information.

In view of the above amendments and accompanying remarks, applicant believes that the application is now in condition for allowance. Notice to that effect is respectfully requested.

If the examiner believes that a telephone conference would expedite prosecution of this application, please telephone the undersigned at (408) 348-1495.

Respectfully Submitted

A handwritten signature in cursive script, appearing to read "Stephen E. Zweig".

Stephen E. Zweig, Ph.D.

Inventor